

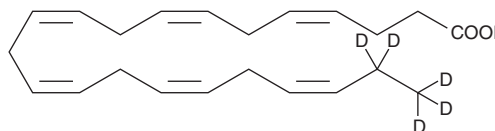
PRODUCT INFORMATION



Docosahexaenoic Acid-d₅

Item No. 10005057

CAS Registry No.: 1197205-71-2
Formal Name: 4Z,7Z,10Z,13Z,16Z,19Z-docosahexaenoic-21,21,22,22,22-d₅ acid
Synonyms: Cervonic Acid-d₅, DHA-d₅
MF: C₂₂H₂₇D₅O₂
FW: 333.5
Chemical Purity: ≥98% (Docosahexaenoic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Docosahexaenoic Acid-d₅ (DHA-d₅) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of DHA-d₅ in these solvents is approximately 50 mg/ml.

DHA-d₅ is used as an internal standard for the quantification of DHA by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Description

DHA-d₅ contains five deuterium atoms at the 21, 21', 22, 22 and 22 positions. It is intended for use as an internal standard for the quantification of DHA (Item No. 90310) by GC- or LC-mass spectrometry (MS). DHA is an essential fatty acid and the most abundant ω-3 fatty acid in neural tissues, especially in the retina and brain. DHA constitutes as much as 40% of the total polyunsaturated fatty acid pool in retinal and neuronal membranes.¹ Supplementation of dietary DHA using fish oil inhibits the progression of atherosclerosis and delays photoreceptor degeneration in retinitis pigmentosa.² Neonatal DHA deprivation causes developmental defects and can lead to hypertension in rats.³

References

1. Salem, N., Kim, H.-Y., and Yergey, J.A. Docosahexaenoic acid: Membrane function and metabolism, Chapter 15, *in* Health Effects of Polyunsaturated Fatty Acids in Seafoods. 263-317 (1986).
2. Hoffman, D.R., Uauy, R., and Birch, D.G. Metabolism of ω-3 fatty acids in patients with autosomal dominant retinitis pigmentosa. *Exp. Eye Res.* **60**, 279-289 (1995).
3. Weisinger, H.S., Armitage, J.A., Sinclair, A.J., *et al.* Perinatal ω-3 fatty acid deficiency affects blood pressure later in life. *Nature Med.* **7(3)**, 258-259 (2001).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/08/2017

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM